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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/672,795

Applicant(s)

ROUSSELLE, PHILIP

Examiner

Michael J. Yigdall

Art Unit

2192

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 26-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 26-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

1. This Office action is responsive to Applicant's reply filed on December 28, 2009. Claims 1-18 and 26-30 are pending.

Response to Arguments

2. Applicant's arguments have been fully considered but they are not persuasive.

Applicant states that the request described in Collison "identifies both the server receiving the request and the name of the requested file" (remarks, page 2), but contends that the request does not separately include the identification of a second distributed application component (remarks, page 3).

However, the examiner submits that the server 204 identified in the request (see, for example, column 5, lines 37-45) represents a "second distributed application component" such as recited in claim 27. Likewise, the browser 11 represents a "first distributed application component" such as recited in the claim.

Applicant contends that Collison does not teach publishing the request to a "publish/subscribe topic" and that Collison does not teach that the topic is "identified based on a property of the second [distributed] application component" (remarks, page 3).

However, as Applicant acknowledges (remarks, page 3), Collison teaches publishing the request as a subject-based request to servers listening on that subject (see, for example, column 5, lines 46-50). In other words, Collison teaches publishing the request to the subject. Collison clearly describes converting the request into a subject-based request for "publish/subscribe communication" (see, for example, column 3, lines 52-54). Indeed, Collison describes mapping

the request to a “subject space” such as that of “whitepaper.html” (see, for example, column 5, line 65 to column 6, line 3). The examiner submits that a “subject” is analogous to a “topic.” The listening servers are “subscribed” to the subject (see, for example, column 3, lines 12-14). Thus, publishing the request to the subject in Collison represents publishing the request to a “publish/subscribe topic” such as recited in claim 27. Here, the topic is identified based on the “whitepaper.html” element of the request, representing a name of a file or a “property” of the server 204. Thus, the topic is “identified based on a property of the second distributed application component” such as recited in the claim.

Applicant is respectfully reminded that the claims are given the broadest reasonable interpretation consistent with the specification. See MPEP § 2111. Moreover, while the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant contends that Collison “fails to teach that the request is received by a middleware program” (remarks, page 4). Specifically, Applicant contends that if the server 204 described in Collison is analogous to the “middleware program” recited in claim 1, then the server 204 “cannot also be analogous” to the “second distributed application component” recited in the claim (remarks, page 4).

However, the examiner does not agree with Applicant’s analysis. First, as noted above, the server 204 described in Collison represents a “second distributed application component” such as recited in the claim. Second, Collison clearly describes that the server 204 receives the request (see, for example, column 5, lines 37-45). Thus, the server 204 also represents a “middleware program” such as recited in the claim. The language of the claim does not specify

that the “second distributed application component” and “middleware program” are necessarily “two separate components” as Applicant argues (remarks, page 4). Nonetheless, a reasonable interpretation is that the server 204 described in Collison comprises one or more modules or components for receiving the request, mapping the request to a subject space (column 5, line 65 to column 6, line 3) and publishing the subject-based request (column 5, lines 46-50). Such modules or components represent the “middleware program” recited in the claim.

Moreover, Applicant is respectfully reminded the test for obviousness is not that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Applicant contends that Collison does not teach that a “publish/subscribe topic” is identified based on a property of a “second distributed application component,” that Collison does not teach a “second distributed application component,” and further that the “whitepaper.html” described in Collison “is not the equivalent” of a “second distributed application component” (remarks, page 4).

However, as reasoned above, Collison teaches a “second distributed application component” in terms of the server 204. In Collison, the subject or “publish/subscribe topic” is identified based on the “whitepaper.html” element of the request, representing a name of a file or a “property” of the server 204. Thus, the “publish/subscribe topic” is identified based on a property of the “second distributed application component” such as recited in claim 1.

Applicant contends that the messages in Codella are “anonymous” and concludes that Codella “teaches away” from the subject matter of claim 1 (remarks, page 5).

However, Codella is cited for teaching a “publisher” such as recited in the claim. As described in Collison, publish/subscribe communications (as compared to point-to-point communications) are not inconsistent with “anonymous” messages (see, for example, column 3, line 52 to column 4, line 5, and column 4, lines 16-33). Thus, the examiner submits that a person of ordinary skill in the art would have been prompted to combine the teachings of the references as set forth in the Office action.

Claim Rejections under 35 U.S.C. § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 27-30 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,051,118 to Collison (already of record, “Collison”).

With respect to claim 27 (previously presented), Collison teaches a computer system for communicating messages between components of a distributed application (see, for example, FIG. 2 and the abstract), the computer system comprising a plurality of communicating computing devices embodied with computer logic that:

receives a message formulated according to request/reply semantics from a first distributed application component (see, for example, step 302 in FIG. 3), wherein the message identifies a second distributed application component (see, for example, column 5, lines 37-45); and in response to receiving the message:

publishes the message to a publish/subscribe topic identified based on a property of the second distributed application component (see, for example, step 308 in FIG. 2).

With respect to claim 28 (previously presented), the rejection of claim 27 is incorporated, and Collison further teaches that said message is a request or reply (see, for example, step 302 in FIG. 3).

With respect to claim 29 (previously presented), Collison teaches a method of communicating messages between components of a distributed application (see, for example, FIG. 2 and the abstract), the method implemented in a computer system comprising a plurality of communicating computing devices, the method comprising:

receiving in the computer system a message formulated according to request/reply semantics from a first distributed application component (see, for example, step 302 in FIG. 3), wherein the message identifies a second distributed application component (see, for example, column 5, lines 37-45); and in response to receiving the message:

publishing in the computer system the message to a publish/subscribe topic identified based on a property of the second distributed application component (see, for example, step 308 in FIG. 2).

With respect to claim 30 (previously presented), the rejection of claim 29 is incorporated, and Collison further teaches that said message is a request or reply (see, for example, step 302 in FIG. 3).

Claim Rejections under 35 U.S.C. § 103

5. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-18 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Collison in view of U.S. Patent No. 6,804,818 to Codella et al. (already of record, "Codella").

With respect to claim 1 (previously presented), Collison teaches a method for facilitating communications between components of a distributed application (see, for example, the abstract) comprising the steps of:

receiving a request by a middleware program from a first distributed application component (see, for example, step 302 in FIG. 3, which shows receiving a request from a web browser), wherein a second distributed application component is identified in said request as a recipient of said request (see, for example, column 5, lines 37-45, which shows that a server is identified in the request as the recipient);

identifying by the middleware program a publish/subscribe topic by identifying a first property of said second distributed application component (see, for example, step 304 in FIG. 3

and column 5, line 65 to column 6, line 3, which shows identifying a first property of the server to identify a subject, and see, for example, column 3, lines 52-54, which shows that the subject represents a publish/subscribe topic).

Collison teaches publishing the request (see, for example, step 308 in FIG. 3), but does explicitly describe:

sending the request by the middleware program to a publisher associated with the first publish/subscribe topic.

However, in an analogous art, Codella teaches a method for facilitating communications between components of a distributed application (see, for example, column 3, lines 47-67). Codella further teaches sending a request to a message proxy that publishes the request to an associated destination (see, for example, column 13, lines 29-36). The destination represents a publish/subscribe topic (see, for example, column 15, lines 61-63).

A person of ordinary skill in the art could, with predictable results, implement the teachings of Collison such that the method comprises the step of sending the request by the middleware program to a publisher associated with the first publish/subscribe topic. As Codella suggests (see, for example, column 13, lines 18-22), such an implementation would further hide from the distributed application components how the requests are formatted and sent. Thus, the claimed subject matter would have been obvious to those of ordinary skill in the art at the time the invention was made.

Collison in view of Codella further teaches or suggests:

publishing by the publisher said request on the first publish/subscribe request topic (see, for example, Collison, step 308 in FIG. 3, which shows publishing the request on the subject),

wherein the distributed application, the middleware program, the publisher and the publish/subscribe topic, are embodied in communicating computing devices (see, for example, Collison, FIG. 2).

With respect to claim 2 (original), the rejection of claim 1 is incorporated, and Collison in view of Codella further teaches or suggests that said first property is a type of said second distributed application component (see, for example, Collison, column 1, line 58 to column 2, line 5, which shows that the first property is a file type of the server).

With respect to claim 3 (original), the rejection of claim 2 is incorporated, and Collison in view of Codella further teaches or suggests that said recipient is identified by a second property of said second distributed application component included within said request (see, for example, Collison, column 5, lines 37-45, which shows that a second property of the server included in the request identifies the recipient).

With respect to claim 4 (original), the rejection of claim 3 is incorporated, and Collison in view of Codella further teaches or suggests that said second property is a unique identifier of said second distributed application component (see, for example, Collison, column 1, line 58 to column 2, line 5, which shows that the second property is a unique identifier of the server).

With respect to claim 5 (previously presented), the rejection of claim 2 is incorporated, and Collison in view of Codella further teaches or suggests the steps of:

subscribing by the middleware program to a first publish/subscribe reply topic (see, for example, Collison, step 316 in FIG. 3, which shows subscribing to a reply subject), wherein said

first publish/subscribe reply topic is identified by a type of said first distributed application component (see, for example, Collison, column 5, lines 46-50, which shows that a file type of the web browser identifies the reply subject);

forwarding by the middleware program a reply posted on said first publish/subscribe reply topic to said first distributed application component (see, for example, Collison, step 318 in FIG. 3, which shows forwarding a reply to the web browser).

With respect to claim 6 (original), the rejection of claim 5 is incorporated, and Collison in view of Codella further teaches or suggests that said reply is generated by said second distributed application component in response to said request (see, for example, Collison, column 6, lines 15-18, which shows that the server generates the reply in response to the request).

With respect to claim 7 (previously presented), the rejection of claim 1 is incorporated, and Collison in view of Codella further teaches or suggests the steps of:

subscribing by the middleware program to a second publish/subscribe request topic, wherein said second publish/subscribe request topic is identified by a type of said first distributed application component (see, for example, Collison, step 316 in FIG. 3);

forwarding by the middleware program a request posted on said second publish/subscribe request topic to said first distributed application component, wherein said request is generated by a third distributed application component (see, for example, Collison, step 318 in FIG. 3);

receiving by the middleware program a reply from said first distributed application component, wherein a recipient of said reply is said third distributed application component (see, for example, Collison, step 302 in FIG. 3); and

publishing by the middleware program said reply on a second publish/subscribe reply topic, wherein said second publish/subscribe reply topic is identified by a type of said third distributed application component (see, for example, Collison, step 308 in FIG. 3).

With respect to claim 8 (previously presented), the rejection of claim 7 is incorporated, and Collison in view of Codella further teaches or suggests that said second and third distributed application components are the same distributed application component (see, for example, Collison, column 5, lines 53-55).

With respect to claim 9 (previously presented), the rejection of claim 7 is incorporated, and Collison in view of Codella further teaches or suggests the step of, prior to forwarding said request posted on said second publish/subscribe request topic,

identifying by the middleware program that a recipient of said request posted on said second publish/subscribe request topic is either said first distributed application component or all distributed application components (see, for example, Collison, column 5, lines 46-50).

With respect to claim 10 (previously presented), the rejection of claim 7 is incorporated, and Collison in view of Codella further teaches or suggests the step of,

sending by the middleware program a callback object to said first distributed application component with said request posted on said second publish/subscribe request topic (see, for example, Collison, column 4, lines 34-40, which shows a callback function, and see, for example, Codella, column 15, lines 32-36, which further shows sending such a callback object with the request).

With respect to claim 11 (previously presented), the rejection of claim 1 is incorporated, and Collison in view of Codella further teaches or suggests the step of,

registering by the middleware program said first distributed application component prior to receiving said request (see, for example, Codella, column 7, lines 30-67), wherein said step of registering comprises:

receiving by the middleware program a type of said first distributed application component, a name of said first distributed application component, a list of all other types of distributed application components that will be sending or receiving requests or replies to/from said first distributed application component (see, for example, Codella, column 7, lines 30-67).

A person of ordinary skill in the art could, with predictable results, implement the teachings of Collison such that the method comprises the step of registering by the middleware program said first distributed application component prior to receiving said request. As Codella suggests (see, for example, column 6, lines 43-52), such an implementation would further enable the middleware program to manage communications to and from the distributed application components. Thus, the claimed subject matter would have been obvious to those of ordinary skill in the art at the time the invention was made.

With respect to claim 12 (previously presented), the rejection of claim 11 is incorporated, and Collison in view of Codella further teaches or suggests that said step of registering further comprises:

receiving by the middleware program a callback object, wherein said callback object directs requests from other distributed application components to said first distributed application component (see, for example, Collison, column 4, lines 34-40, which shows a callback function,

and see, for example, Codella, column 15, lines 37-44, which further shows receiving such a callback object).

With respect to claim 13 (previously presented), the rejection of claim 12 is incorporated, and Collison in view of Codella further teaches or suggests the step of,

invoking by the middleware program said callback object to deliver said request to said first distributed application component (see, for example, Codella, column 15, lines 32-36, which shows invoking the callback object).

With respect to claim 14 (previously presented), the rejection of claim 11 is incorporated, and Collison in view of Codella further teaches or suggests that said step of registering further comprises:

sending by the middleware program a callback object to said first distributed application component (see, for example, Collison, column 4, lines 34-40, which shows a callback function, and see, for example, Codella, column 9, lines 51-54, which further shows sending such a callback object).

With respect to claim 15 (previously presented), the rejection of claim 11 is incorporated, and Collison in view of Codella further teaches or suggests that said step of registering further comprises:

creating by the middleware program a publisher for a publish/subscribe request topic of each of said other type of distributed application component receiving a request from said first distributed application component (see, for example, Codella, column 7, lines 3-24);

creating by the middleware program a publisher for a publish/subscribe reply topic of each of said other type of distributed application component types receiving a reply from said first distributed application component (see, for example, Codella, column 7, lines 3-24);

creating by the middleware program a subscription for a publish/subscribe request topic of said type of said first distributed application component (see, for example, Collison, step 310 in FIG. 3); and

creating by the middleware program a subscription for a publish/subscribe reply topic of said type of said first distributed application component (see, for example, Collison, step 316 in FIG. 3).

With respect to claim 16 (previously presented), the rejection of claim 15 is incorporated, and Collison in view of Codella further teaches or suggests that said subscription for a publish/subscribe request topic of said type of said first distributed application component includes a filter that only accepts requests addressed to said first distributed application component or all distributed application components (see, for example, Collison, steps 402 and 418 in FIG. 4).

With respect to claim 17 (previously presented), the rejection of claim 15 is incorporated, and Collison in view of Codella further teaches or suggests that said subscription for a publish/subscribe reply topic of said type of said first distributed application component includes a filter that only accepts replies addressed to said first distributed application component (see, for example, Collison, steps 402 and 418 in FIG. 4).

With respect to claim 18 (original), the rejection of claim 1 is incorporated, and Collison in view of Codella further teaches or suggests that said request comprises one or more instructions directed toward a task to be performed by said second distributed application component (see, for example, Collison, column 5, lines 1-10).

With respect to claim 26 (previously presented), the rejection of claim 1 is incorporated, and Collison in view of Codella further teaches or suggests that the middleware program is a middleware wrapper (see, for example, Collison, column 5, line 65 to column 6, line 7).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Yigdall whose telephone number is (571) 272-3707. The examiner can normally be reached on Monday to Friday from 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J. Yigdall/
Primary Examiner, Art Unit 2192